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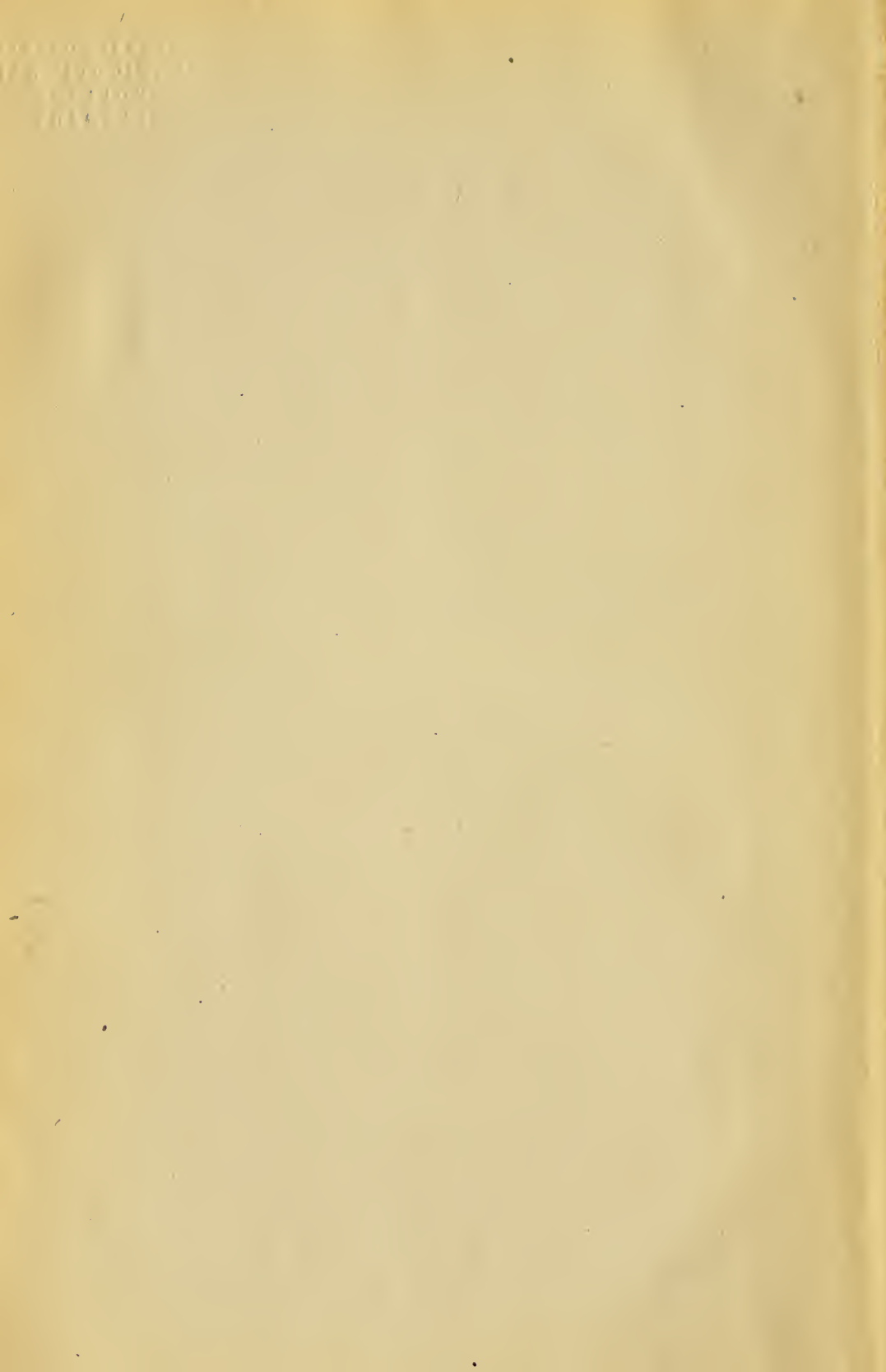
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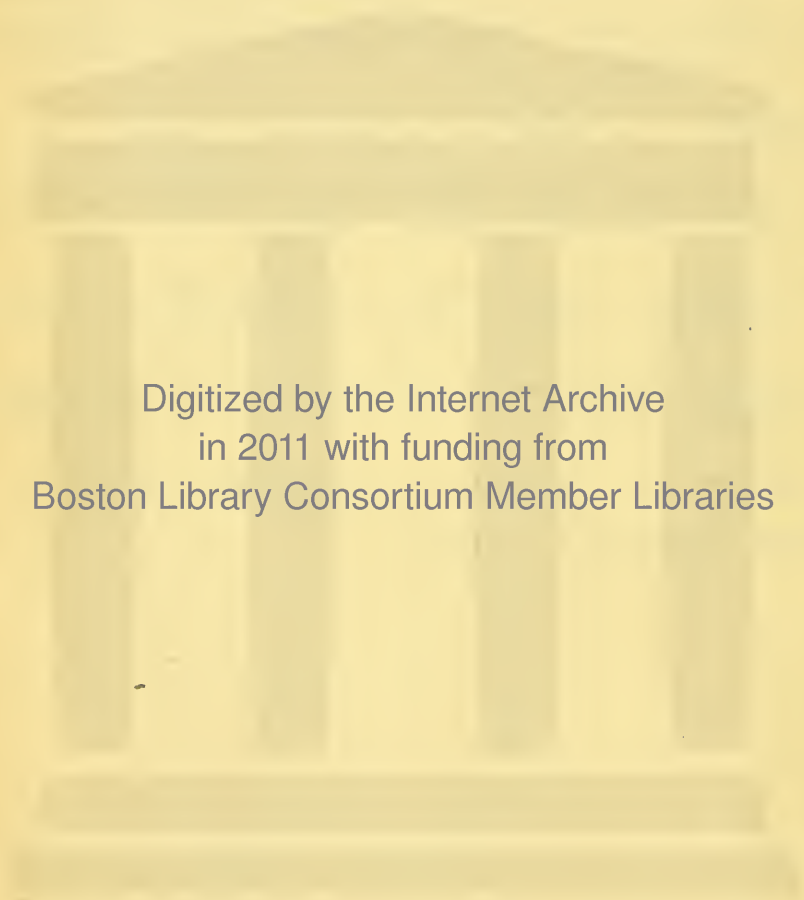
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# INTERNATIONAL INSTITUTE OF AGRICULTURE

## BUREAU OF STATISTICS

*Extract from the Conclusion of the 9th number of the Statistical Notes on Cereals, Studies on Yield, Trade, Consumption, Prices, and Rates of Ocean Freights.*

The Statistical Notes were ready for the press when a strike of printers occurred in Rome which has lasted over a month. As the strike was expected to end at any time, no provision was made until now to have at least the principal part of the conclusions printed thus serving until the proper publication was made.

### I. YIELD.

#### A. — Yield of food cereals.

The data refer to the following countries:

*Wheat.* — *Northern Hemisphere*: Germany (not including Alsace-Lorraine), Denmark, Spain, France, Great Britain and Ireland, Italy, Luxemburg, Norway, Netherlands, Sweden, Switzerland, Canada, United States, India, Japan, Egypt and Tunis. — *Southern Hemisphere*: Argentina, Union of South Africa, Australia and New Zealand.

*Rye.* — *Northern Hemisphere*: Germany (not including Alsace-Lorraine), Denmark, Spain, France, Ireland, Italy, Luxemburg, Norway, Netherlands, Sweden, Switzerland, Canada and United States.

The yield of the food cereals wheat and rye for the above-mentioned countries; which amounts in 1918 for the Northern Hemisphere and in 1918-19 for the Southern Hemisphere to 837,215 thousand quintals, is notably higher than that of the previous year (724,957), and also higher than the average of the four years of war (810,021) and than the average of the five years preceding the war (815,183). The increase amounts to 15,500 compared with the preceding year, 3,400 with the four-year average, and 2,700 with the five-year average.

#### B. — Yield of fodder cereals.

*Barley.* — *Northern Hemisphere*: Germany (not including Alsace-Lorraine), Denmark, Spain, France, Great Britain and Ireland, Italy, Luxemburg, Norway, Netherlands, Sweden, Switzerland, Canada, United States, Japan, Egypt and Tunis.

*Oats.* — *Northern Hemisphere*: Germany (not including Alsace-Lorraine), Denmark, Spain, France, Great Britain and Ireland, Italy, Luxemburg, Norway, Netherlands, Sweden, Switzerland, Canada, United States, Japan and Tunis.

*Southern Hemisphere*: Argentina and New Zealand.

*Maize.* — *Northern Hemisphere*: Spain, France, Italy, Switzerland, Canada, United States and Japan. *Southern Hemisphere*: Argentina, Union of South Africa, New Zealand.

These fodder cereals taken altogether, show for the year under consideration a yield slightly less than for the previous year, the average for the four years of war and the average for the five years before the war. The figures are 1,308,861; 1,408,623; 1,362,816; 1,330,055 thousand quintals respectively, with a diminution in 1918 (and 1918-19) of 7,100 compared with the previous year, 400 with the four-year average and 1,600 with the five-year average.

#### C. Total Yield.

Although it may seem incorrect to add together purely and simply commodities of such diverse nature as food cereals and fodder cereals, considering the difference in their nutritive value and in their use, we think that in this case such a step is permissible because in various countries, at

least during a part of the current season, Governments have ordered the mixing of flour made from fodder cereals with flour made from wheat.

By adding together the totals of the production of wheat, rye, barley, oats and maize, a general total for 1918 (and 1918-19) is obtained amounting to 2,146,076 thousand quintals, which is very slightly higher (0.6 o/o) than the total for the previous year (2,133,580), and a little lower (1.2 o/o) than the average of the four years of war (2,172,832), while practically equal to the average for the last five years of peace (2,145,238).

It should be remembered, however, that as indicated for each product in its respective paragraph relating to production, the lack of data for various countries renders our totals incomplete.

## II. — CONSUMPTION.

We may now pass on to examine our tables relative to consumption.

### WHEAT AND RYE.

We give a resumé of data relating to the group of countries for which, knowing on one hand the production, and in some measure the stocks and on the other hand the probable consumption, we have been able to determine the surplus or deficiency at the beginning of the current season.

NORTHERN HEMISPHERE	Wheat	Rye	Total (Thousands of quintals)
Total quantities available at 1 August 1918	491,431	25,432	516,863
Estimated consumption in succeeding commercial season from 1 Aug. 1918 to 31 July 1919 . . . . .	473,627	24,591	498,218
Surplus at 1 August 1918. . . . .	17,804	841	18,645

SOUTHERN HEMISPHERE.			
Total quantities available at 1 Jan. 1919. .	126,375	—	126,375
Estimated consumption in succeeding commercial season from 1 Jan. to 31 Dec 1919	29,944	—	29,944
Surplus at 1 Jan. 1919 . . . . .	96,931	—	96,431

For this group of countries we have also been able to determine on the data for imports and exports from 1 Aug. 1918 to 31 March 1919 (in the north in hemisphere) and from 1 Jan. to 31 March 1919 (in the southern hemisphere), the surplus or deficiency at 1 April 1919. The results are shown in the following table.

### A. — Exporting countries..

NORTHERN HEMISPHERE	Wheat	Rye	Total (Thousands of quintals)
Surplus at 1 August 1918 . . . . .	128,590	3,365	131,955
Quantities exported from 1 August 1918 to 31 March 1919 . . . . .	62,052	(1) (— 66)	61,986
Surplus at 1 April 1919 . . . . .	66,538	3,431	69,969
SOUTHERN HEMISPHERE.			
Surplus at 1 Jan. 1919 . . . . .	96,524	—	96,524
Quantities exported from 1 Jan. to 31 March 1919 . . . . .	8,931	—	8,931
Surplus at 1 April 1919 . . . . .	87,593	—	87,593
TOTALS FOR BOTH HEMISPHERES.			
Surplus at 1 April 1919 . . . . .	154,131	3,431	157,562

(1) These are quantities imported not exported,

## B. — Importing countries.

NORTHERN HEMISPHERE.	Wheat	Rye	Total
	(Thousands of quintals)		
Deficiency at 1 Aug. 1918 . . . . .	110.786	2,524	113.310
Quantities imported from 1. Aug. 1918 to 31 March 1919 . . . . .	63.515	396	63.911
Deficiency at 1 April 1919 . . . . .	<u>47.271</u>	<u>2.128</u>	<u>49.399</u>
SOUTHERN HEMISPHERE			
Deficiency at 1 Jan. 1919. . . . .	93	—	93
Quantities imported from 1 Jan. to 31 March 1919 . . . . .	123	—	123
Deficiency at 1. April 1919 . . . . .	(2) <u>(+ 30)</u>	<u>—</u>	(2) <u>(+ 30)</u>
TOTALS FOR BOTH HEMISPHERES.			
Deficiency at 1 April 1919 . . . . .	47.241	2.128	49.369

The situation according to the above figures is thus very favourable, as against a deficiency on the whole of bread-making cereals in importing countries, amounting to 49.369 thousand quintals, we should have in exporting countries an available surplus of 157.562 thousand quintals. It should however be borne in mind that our data refer to a limited number of countries.

To complete the survey of the actual world's situation at 1 April 1919, we must consider also the amounts available and the needs of the countries for which we have no information, for the current season, as to yield stocks or consumption, or as to the result of these elements, for which therefore we have not been able to calculate the surplus or deficiency.

These countries may be sub-divided into two groups: (A) those for which trade was free during the war, and (B) those which, on account of the war, were under blockade or in some way cut off from international trade and found it impossible to send products to foreign markets or receive products from these: such countries as are now supplied through the Interallied Food Council.

(A) On the basis of the average surplus of imports over exports, or vice versa, for the three years 1914 to 1916, we can estimate that the countries of the first group showed as a whole at 1 August 1918 a net deficiency of about 30.000 thousand quintals of wheat and rye. On the hypothesis that from the beginning of the season to 31 March 1919 these countries have reduced their deficiency in the same proportion as the countries for which we know the figures, that is, they have imported a mass of cereals equal to 58 0/10 of the original deficiency, then it follows that at 1 April 1919 they had still to complete the 42 0/10 of their original deficiency, or in other words import about 17.000 thousand quintals.

(B) For the countries of the second group, on the basis of various elements, we believe it possible to estimate that they still had to receive, from 1 April to the end of the current season, a minimum of twenty million quintals in wheat and rye.

By adding, therefore, to the deficiency which we had already calculated at 49 million quintals, these two new deficiencies; estimated approximately at 17 million and 20 million quintals, we may conclude that the total deficiency at 1 April 1919 would be about 87 million quintals. Against this however, as we have already seen, there is in exporting countries a surplus of 158 million quintals, in round figures.

From what has been shown and from the tables, the following results may be drawn:

(1) That the quantities of grain required by countries in deficiency are abundantly met by the amounts available from countries with a surplus.

(2) That the quantities transported from 1 April to the end of the season are fairly considerable.

— (2) There is an actual surplus here instead of a deficiency.



(3) That a large proportion of the quantities available is to be found in trans-oceanic countries.

(4) That, in consequence, the possibility of replenishment for importing countries in the northern hemisphere by the beginning of the new season, depends on the tonnage available. The latter has increased lately but it is doubtful if it will suffice entirely in view of the other urgent needs of transport.

Looking beyond the present season to the next one for a moment, we get the impression that the situation in Europe appears unfavourable, with an estimated deficiency above the normal. On the other hand the crop of winter wheat in the United States promises to be abundant. This circumstance, with the large stocks which there must certainly still be in Argentina and Australia at the beginning of the new season, give confidence that the world's needs of next season will be met.

#### BARLEY, OATS AND MAIZE

As in the case of wheat and rye, we have collected in the following table on one hand the production and to some extent the stocks, and on the other hand the probable consumption, and so have been able to determine the surplus or deficiency at 1 August 1918.

NORTHERN HEMISPHERE	Barley	Oats	Maize	Total
	(Thousands of quintals)			
Total quantities available at 1 August 1918 . . . . .	83.402	161.131	26.468	271.001
Estimated consumption in succeeding commercial season from 1 August 1918 to end July 1919 . . . . .	85.503	168.878	45.716	300.097
Deficiency at 1 August 1918 . . . . .	2.101	7.747	19.248	29.096

For the same group of countries we show also, in the following table, the situation at 1 April 1919 based on the imports and exports taking place from 1 August 1918 to 31 March 1919.

#### A. — Exporting countries.

NORTHERN HEMISPHERE	Barley	Oats	Maize	Total
	(thousands of quintals)			
Surplus at 1 August 1918 . . . . .	5.074	6.188	131	11.393
Quantities exported from 1 Aug. 1918 to 31 March 1919 . . . . .	509	3,625 (1) (— 361)		3,773
Surplus at 1 April 1919 . . . . .	4,565	2,563	492	7,620

#### B. — Importing countries.

Deficiency at 1 August 1918 . . . . .	7.165	13.935	19.379	40.479
Quantities imported from 1 August 1918 to 31 March 1919 . . . . .	1.449	13.854	6.200	21.503
Deficiency at 1 April 1919 . . . . .	5.716	81	13.179	18.976

The restricted number of countries to which the totals in the above table refer (amongst others, the United States and Argentina figures are lacking) does not permit of any conclusion being drawn from them. As in the case of wheat and rye, we may try to calculate from the above, on the average imports and exports in the past, the deficiency or surplus at 1 August 1918 in the other countries. It is in fact well known that international trade in barley, oats and maize has been done under abnormal conditions in the present season, on account of the scarcity of tonnage available which has been confined mostly to the transport of bread-making cereals.

*Rome, August 1919.*

(1) This represents the quantity imported instead of exported.













